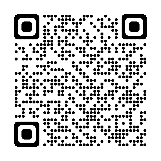
[](https://meeceport.netlify.app/)Mauricio Ferrari

Orlando, FL | (305) 927-6786 | [ferrariknight7@gmail.com](mailto:ferrariknight7@gmail.com)

**Education**

**University of Central Florida Orlando, FL**

Bachelor of Science in Computer Engineering  *3.78 GPA* Minors in Intelligent Robotic Systems and Mathematics

**Technical Skills**

Verilog, C, MIPS, Java, JavaScript, Apps Script, Python, PHP, React, HTML, CSS, C++, ThreeJS, Git, Vivado, Multisim, KiCad, COMSOL, Eagle, MATLAB, Simulink, Postman, Wireshark, SwaggerHub, Arduino, NodeJS, Raspberry Pi, Blender, MongoDB, Yarn

**Experience**

**Lead Rush Labs Orlando, FL**

*Software Developer Intern*  *May 2023 – Aug. 2023*

* Refactored Apps Script functions by implementing asynchronous programming for API calls which reduced runtime by 33%
* Eliminated redundant code and improved recursive functions
* Rectified JSON parsing issues which increased the efficiency and reliability of OpenAI responses

**University of Central Florida Orlando, FL**

*CREOL Fiber Optics Laboratory – Undergraduate Research Assistant*  *Jan. 2022 – Aug. 2022*

* Ran simulations on COMSOL to identify at which eigenvalues single-mode transmission occurred
* Experimented with optical setups to achieve optimal mode matching/light efficiency

**University of Central Florida Orlando, FL**

*College of Sciences, CECS - Undergraduate Teaching/Learning Assistant*  *Aug. 2021 – Aug. 2022*

* Ordinary Differential Equations I, Calculus with Analytical Geometry I, Linear Circuits I
* Offered tutoring, held office hours, led recitation sessions, prepared and graded coursework

**Projects**

**Foodie Rover In Progress**

Foodie Rover is a small autonomous vehicle doubling as a food convoy for UCF’s Senior Design exhibition.

* Employing Google Maps API services to dynamically provide routing information
* Developing a computer vision obstacle aversion system using TensorFlow
* Constructing a mobile application to communicate directly with Foodie Rover’s security system
* Operationalizing servos, magnetometers, and GPS modules to accurately ping location

**LeetSocial November 2023**

LeetSocial is a web/mobile-app for UCF’s Processes of Object-oriented Software Development that serves as a social platform for LeetCode where you can view a leaderboard compiled of your friends’ statistics.

* Integrating MongoDB and Express with React and Node JS to complete a MERN stack
* Incorporated GraphQL to communicate with LeetCode API endpoints
* Employed JSON web tokens to store user information from the database into the local storage cache to reduce API calls

**Moody Music Player September 2023**

Developed a therapy chatbot with facial recognition that could determine your mood and utilized APIs to communicate with a microcontroller that plays music for the 2023 ShellHacks hackathon.

* Programmed an ESP32 microcontroller in Arduino IDE to establish a Wi-Fi connection and host a webserver
* Engineered a common-emitter amplifier circuit to streamline current effects on a piezo active buzzer
* Utilized Postman to implement REST APIs in JavaScript carrying JSON data storing the mood state of the user

**Contact Manager September 2023**

Created a contact manager web application following LAMP stack structure that showcased CRUD applicability for UCF’s Processes of Object-oriented Software Development course.

* Assembled APIs with PHP scripting to transmit requests between the front-end and database
* Facilitated API documentation on SwaggerHub according to OpenAPI 2.0 specifications

**SHPE UCF** • **Robotics Club of Central Florida** • **IEEE** • **Relectric** • **SEDS**